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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,983	04/21/2005	Ionel D. Jitaru	14609-0030	2934

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06/27/2007

EXAMINER

RILEY, SHAWN

ART UNIT	PAPER NUMBER
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2838

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,983

Applicant(s)

JITARU, IONEL D.

Examiner

Shawn Riley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13 and 15-30 is/are pending in the application.
- 4a) Of the above claim(s) 18-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>apr07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to amendment and remarks

1. Applicants remarks and amendment of the 19 April 2007 have been fully considered but not deemed persuasive. Claims 9 and 13 have been canceled.

2. Applicants state:

Regarding claim 1 it is said that the items 110 and 116 are a switching input and a switching output of the Faulk converter. This is not the case. At column 3, lines 44 - 46, Faulk clearly indicates that the transistor 110 is itself the switching device.

The examiner agrees but also asserts this does not change the fact that the switching devices have inputs/output inherently, and at most, this statement by the examiner is a typo (116 instead of 110). Clearly this concept is well understood by a person of ordinary skill in the art. The switching device is 110 and it has an input and an output.

Applicants further state:

Furthermore, in the Official Action the control input called for in claim 1 is referred to as an input into controllers 144 and/or 142. This is unsustainable, but even if the Faulk patent is read in that way these controllers do not serve "for enabling or disabling said switching device from conducting current from said switching input to said switching output" as stated in the comments in the Official Action. No current is ever conducted between the switching transistor 110 and the switching transistor 116 in the Faulk patent. [emphasis added.] The two are isolated by the transformer 100.

Moot argument due to typo.

Applicants state:

The comments concerning claim 1 go on to say that one or both of the windings 136 and/or 278 of the transformer 100 in Faulk should be considered the bias winding called for in claim 1 for producing a bias voltage representative of the output power. However neither of these two windings produces an output representative of the output power. Faulk clearly indicates that the winding 136 represents the input voltage to the entire converter VIN to the entire converter as shown in, for example, Fig. 1. See column 7,

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lines 58 - 62. As for the auxiliary winding 278, Faulk makes it clear that this is used to power up the slave controller 142. See column 19, lines 56 - 57.

278 directly measures a ratio of the output voltage and thereby produces a bias voltage representative of the output power and feeds directly back into the control circuit via at least 260.

Finally applicants state:

In the outstanding Official Action, the comments concerning claim 1 go on to say that "a control circuit (144/142) for (a) determining the rate of change of said bias voltage" is supported in the Faulk patent at column 6, lines 4 - 7. That is not the case. The rate of change referred to in column 6 of the Faulk patent in the location referred to by the examiner is the rate of change of the drain voltage V_d of the switching transistor 110.

The drain of the MOSFET happens to be connected to the bias winding which therefore functions as stated in the paragraphs indicated previously.

1. Newly submitted claims 18-30 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: use of magnetic storage and synchronous rectifier.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits.

Accordingly, claims 18-30 are withdrawn from consideration as being directed to a non-elected invention.

See 37 CFR 1.142(b) and MPEP § 821.03.

2. This application contains claims 18-30 drawn to an invention nonelected by original presentation.

A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

For at least the above reasons this action has been made final.

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A person shall be entitled to a patent unless –

2. Claims 1-8, 10-12 and 14-17 are rejected under 35 U.S.C. §102(b) as being fully anticipated by Faulk (U.S. Patent 5,757,627i). Faulk shows,¹ (in, e.g., the(ir) figures 3a & 3b and corresponding disclosure)

As to claim 1. A power converter for supplying an output power to a load, comprising: a

¹ Note claims will be addressed individually and the material in parentheses are the examiner's annotated comments. Further unless needed for clarity reasons, recited limitation(s), will be annotated only upon their first occurrence. Annotated claims begin with the phrase "As to claim". Claims that are not annotated are seen as having already had the invention(s) addressed previously in an annotated claim and may be repeated for convenience of the applicant/examiner. Bolded words/phrases indicate rejected material based 112 paragraph rejections. Underlined words/phrases indicate objected to material.

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switching device (110) having a switching input (input into 110), a switching output (output of 110), and a control input (input into 144/142) for enabling or disabling said switching device from conducting current from said switching input to said switching output; and a network wherein said switching device input, said switching device output, and the load are connected together in a circuit; a bias winding (136/278) in said circuit for producing a bias voltage representative of the output power; and a control circuit (144/142) for (a) determining the rate of change of said bias voltage (column 6 lines 4-7), (b) characterizing said rate of change (column 6 lines 7-10), and (c) controlling said control input as a result of the characterization (b) (column 6 lines 13-14).

As to claim 2. The power converter of claim 1, further comprising a power input portion (131) and a power output portion (V_{out}) for providing said output power, wherein said circuit (144) is in said power output portion.

As to claim 3. The power converter of claim 2, further comprising a connecting portion (100) for coupling said power input portion to said power output portion, wherein said connecting portion includes an inductor as part of said power output portion, wherein said bias winding is coupled in series with said inductor.

As to claim 4. The power converter of claim 3, wherein said connecting portion includes a transformer (100) having a primary winding as part of said power input portion and a secondary winding which includes said inductor.

As to claim 5. The power converter of claim 1, wherein said control circuit is adapted so that the determination (a) includes comparing said bias voltage at a selected time relative to a selected starting value of said bias voltage, and so that the characterization (b) includes comparing the change in said bias voltage (RAMP input into 144) in (a) to a reference (reference input REF into 144).

As to claim 6. The power converter of claim 2, wherein said control circuit is adapted so that the determination (a) includes comparing said bias voltage at a selected time relative to a selected starting value of said bias voltage, and so that the characterization (b) includes comparing the change in said bias voltage in (a) to a reference (see above rejection of claim 5).

As to claim 7. The power converter of claim 3, wherein said control circuit is adapted so that the determination (a) includes comparing said bias voltage at a selected time relative to a selected starting value of said bias voltage, and so that the characterization (b) includes comparing the change in said bias voltage in (a) to a reference (see above rejection of claim 5).

As to claim 8. The power converter of claim 4, wherein said control circuit is adapted so that the determination (a) includes comparing said bias voltage at a selected time relative to a selected starting value of said bias voltage, and so that the characterization (b) includes comparing the change in said bias voltage in (a) to a reference (see above rejection of claim 5).

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As to claim 10. The power converter of claim 5, wherein said characterization (b) includes determining whether the rate of change is either high or low compared to said reference (this is how a comparison is done by definition).

As to claim 11. The power converter of claim 6, wherein said characterization (b) includes determining whether the rate of change is either high or low compared to said reference. (this is how a comparison is done by definition).

As to claim 12. The power converter of claim 7, wherein said characterization (b) includes determining whether the rate of change is either high or low compared to said reference (this is how a comparison is done by definition).

As to claim 13. The power converter of claim 8, wherein said characterization (b) includes determining whether the rate of change is either high or low compared to said reference (this is how a comparison is done by definition).

For method claims 15-17, note that under MPEP 2112.02, the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). Therefore the previous rejections based on the apparatus will not be repeated.

15. In a power converter, a method for supplying an output power to a load, comprising the steps of: providing a power input portion; providing a power output portion comprising a switching device having a switching input, a switching output, and a control input for enabling or disabling said switching device from conducting current from said switching input to said switching output, and a network wherein said switching device input, said switching device output, and the load are connected together in a circuit; providing a bias voltage representative of the output power; determining the rate of change of said bias voltage; characterizing said rate of change; and controlling said control input as a result of said step of characterizing.

16. The method of claim 15, wherein said step of determining includes comparing said bias voltage at a selected time relative to a selected starting value of said bias voltage, and wherein said step of characterizing

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includes comparing the change in said bias voltage in said step of determining to a reference.

17. The method of claim 16, wherein said step of characterizing includes determining whether the rate of change is either high or low compared to said reference.

Note that applicants are presumed to have knowledge of their art and therefore may be expected to recognize, e.g., what a comparison would be. Further, differences should be pointed out not between disclosure and the prior art but what is claimed and the prior art. The rejection of the instant invention did not rely on the disclosure but the claims in light of the disclosure. That is, the rejection is based heavily on what the claims state and not solely on what the disclosure discloses. As recited, the claims are anticipated by the disclosure of the prior art.

Allowable Subject Matter

3. No claims are allowable over the prior art of record.


Conclusion

Any inquiry from other than the applicant/attorney of record concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197. Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications

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from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Karl Easthom who can be reached at 571.272.1989. Any inquiry about a case's location, retrieval of a case, or receipt of an amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent to fax number **571-273-8300**. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center).

June 07


Shawn Riley
Primary Examiner